



## PATENT ABSTRACTS OF JAPAN

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(72) Inventor: **ISHIGURO SHUICHI****(54) AUTOMATIC DISTORTION COMPENSATION CIRCUIT**

modulating distortion components.

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**(57) Abstract:**

**PURPOSE:** To stably secure the amplifying efficiency of a power amplifier and to automatically compensate the nonlinear distortion of the power amplifier highly efficiently by automatically following and saving even when the mutual modulating distortion of the power amplifier changes.

**CONSTITUTION:** A distortion generation part from one side of a distributor 12a by way of a linear compensation circuit 11 to a variable amplifier circuit 18 compensate nonlinear distortion generated at the power amplifier 22 and generates a predistortion signal provided with an amplitude and a phase for compensating mutual modulating distortion from an original signal. Then, a synthesizing part including a synthesizer 13a synthesizes the predistortion signal to be the original signal to send to the power amplifier 22. A control part including a phase comparing circuit 35 and an amplitude comparing circuit 34 to which the output signal of the power amplifier 22 is feedback-transmitted from a directional coupler 23 controls the amplitude and the phase of the predistortion signal based on mutual modulating distortion components extracted from the power amplifier 22 so as to minimize the mutual

